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March 6. 2003

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms Marlene H Dortch
Secretary
Federal Communications Commission
445 12th Street, SW, Room TW-A325
Washington, DC 20554

KE Section 68.4(a) of the Commission's Rules Governing
Hearing Aid Compatibility Telephone
WT Docket No 01-309 **EX PARTE**

Dear Ms Dortch:

On March 5, 2003, representatives of Siemens and Cingular Wireless met in a joint meeting with members of the Wireless Telecommunications Bureau, Consumer and Governmental Affairs Bureau and the Office of Engineering and Technology to discuss issues related to the referenced proceeding

Two documents were used for discussion purposes, the attached document and the ex parte document previously submitted by Siemens and Cingular Wireless on January 22, 2003 Please associate this notification and accompanying material with the referenced docket proceeding.

The list of attendees for the meeting is attached. If there are any questions concerning this matter, please contact the undersigned.

Sincerely,

Ben G Almond
Vice President-Federal Regulatory Affairs

Attachments

Cc Joel Taubenblatt
Mindy Littell
Pat Forster
Greg Guice
Janet L Sievert
Jerry Stanshine

March 5, 2003 Siemens/Cingular Wireless. **Ex** Parte-Docket 0 1-309

Attendees:

FCC

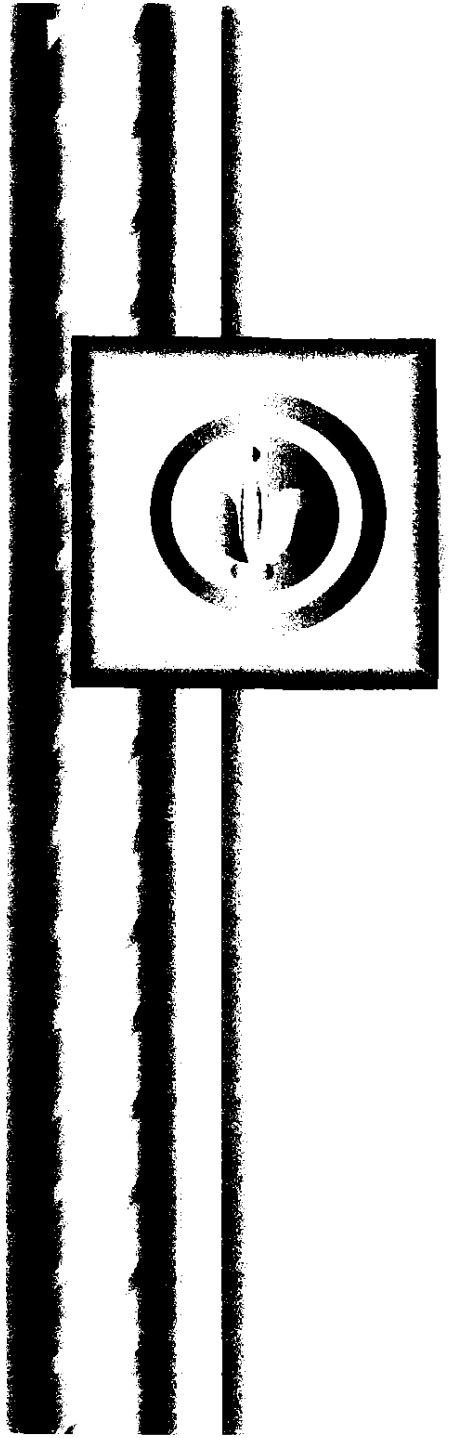
Joel Taubenblatt-WTB
Mindy Littell-WTB
Pat Forster-WTB
Greg Guice-WTB
Janet Sievert-DRO
Jerry Stanshine-OET

Siemens

Ross Vincenti
Eleanor Kerr
Stephen Berger (consultant)

Cingular Wireless

Susan Palmer
Ben Almond



Hearing Aid Compatibility
-
Testing & Technical Update

Cingular Wireless

Siemens

Ex Parte – WT Docket 07-309

Overview

- Results of Siemens hearing aid and handset testing
- T-Coil and Functional Equivalency
- ANSI C63. 19 Background
- Cingular/Siemens Earlier Ex Parte Recommendations (Chart)
  - Technical Incubator and Steering Committee
  - Communication/Education

Technical Overview

The Siemens handset and hearing aids performed well together

- ***ANSI C63.19 accurately predicted performance***

- ***To achieve our recommended T-Coil performance flexible design options are needed***

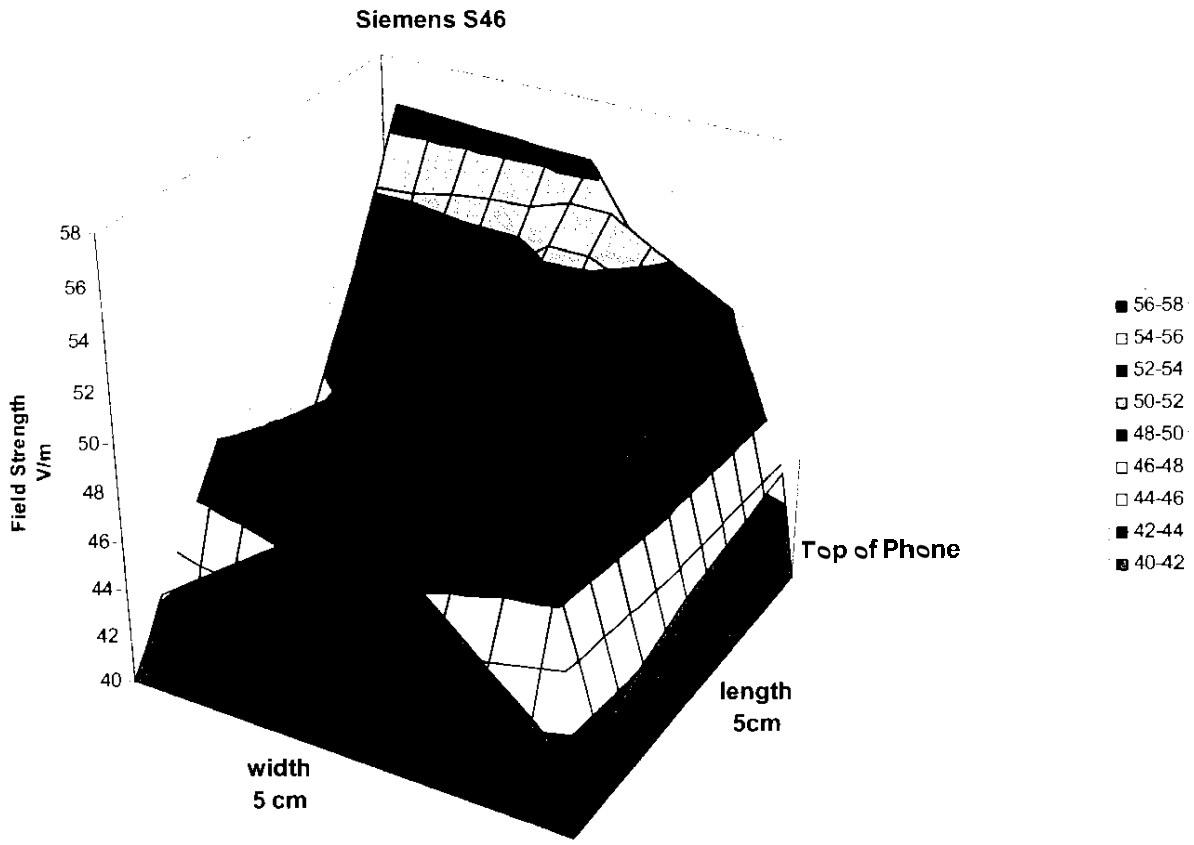
Results of Siemens Testing

Siemens handsets were tested and achieved the U3 & U4 category per ANSI C63.19

Siemens Triano S hearing aid also achieved the U4 category for RF immunity

- **When tested together the Triano S hearing aid had no audible interference near the handsets in microphone mode, but some interference in T-Coil mode.**

Siemens S46 Handset plots – E-Field Plot



ANSI C63.19 System Classification

System Classification	Articulation Index AI	U Category Sum Sum of Hearing Aid (U Category) + Telephone (U Category)
Usable	*0.3*	= 4
Normal Use	***0.5***	= 5
Excellent Performance	0.7	>= 6

- **The combination of the U category of the phone and the hearing aid must equal 5 or greater to achieve the recommended performance level.**
- ***The most appropriate forum to set specific limits is a technical standards committee with both industries represented.***

Next Step User Testing

Lab testing with hearing aids users will be conducted with Gallaudet University

Field testing will then be conducted with actual hearing aid users

Target Date for Completion: Late Spring

A report with analysis and summary of the results will be made available and is expected to be useful in developing consumer guidance

Flexible Design Options Should Be Considered

- **T-Coils may not always be the best answer**
  - **When given a technical choice inductive loop (T-Coil) systems sell the least even though they are the cheapest**
  - **Increasing level of electronic saturation in work and public environments make T-Coil use impossible in many locations.**
  - **Only a small percentage of hearing aid users use T-Coils**

Flexible Design Options Should Be Considered

- Form factors, especially in small phones, impact ability to build in T-coil antenna
  - A dynamic speaker will produce a T-Coil signal that may pass the current Part 68 level but be too low for many users
  - A more effective solution requires much higher signal levels and so a separate T-Coil antenna and special circuitry
- Other forms of coupling should be allowed if functionally equivalent

Solutions should be identified and tested in a Technical Incubator

ANSI C63.19 Questions

Posed by the FCC and others

Why conduct testing in analog mode?

Analog phones can interfere with hearing aids, contrary to common belief. However, when they interfere the symptom is not an audible 'buzz' but rather changes to the hearing aid gain. The analog signal can interfere with the gain setting of some hearing aids.

ANSI C63.19 Questions

Posed by the FCC and others

What are issues that can make the results of user testing appear inconsistent with ANSI tests?

In many cases user testing is performed without proper controls. Common problems are not knowing the immunity of the user's hearing aid or the transmission level of the phone.

ANSI C63.19 Questions

Posed by the FCC and others

- **How can the results of hearing aid and handset testing help consumers?**

  When hearing aids and handsets are properly matched, consumers can be guided to effective solutions with a high degree of confidence.

Cingular/Siemens Recommendations

- **Technical Focus – unbiased assessment**
- **Technical Incubator with engineers specializing in hearing and wireless technologies that develop and test solutions**
- **Independent Steering Committee, not Federal Advisory Committee, to guide efforts**
- **FCC/FDA must actively participate**

Education and Outreach

In addition to guiding the Technical Incubator, the Steering Committee can address non-technical issue

- **Effective use of handsets**
  Determining what combinations work can be complex.
- **Support by audiologist and other relevant professionals may be required.**

The hearing aid and wireless industry, consumers and hearing health professionals must work together to simplify product selection and provide additional assistance.

Summary of Technical Issues

- **Testing demonstrated that Siemens hearing aid designs effectively mitigated interference**
- **The ANSI C63.19 standard is effective.**
  - **Minor variations in user testing can impact apparent outcome.**
  - **Variables must be monitored carefully to test effectively.**
  - **The standard should be updated to address the current state of technology.**
- **Our recommended level of T-Coil performance is feasible with an external accessory**

A Cooperative and Comprehensive Approach is Needed

Cingular/Siemens believe that both technical and user issues must be addressed

Both wireless and hearing aid manufacturers must work toward a cooperative solution-based approach, endorsed by both the FCC and FDA.

Steps should include:

- **An unbiased technical assessment of the issue**
- **A Technical Incubator with a steering committee with active participation and monitoring by both agencies**
- **Development of easy and consistent information on product selection and usage**